

I. AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) ~~An enterprise control system for use in an environment for producing semiconductor-related product, the system~~ A method comprising:

~~a first mechanism~~ for maintaining an exchange of information between a primary provider and a secondary provider, the information pertaining to the semiconductor-related product;

assigning a predetermined event element to the semiconductor-related product at the secondary provider, wherein the predetermined event element includes a product-specific process parameter;

~~a second mechanism~~ for collecting the exchanged information;

~~a third mechanism~~ for collecting event information upon an occurrence of a predetermined event element associated with the semiconductor-related product; and

~~a fourth mechanism~~ for providing the collected exchanged information and the collected event information to a customer associated with the semiconductor-related product.

2. (Currently Amended) The ~~system~~ method of claim 1 ~~further comprising:~~

~~a fifth mechanism~~ for wherein the assigning the predetermined event element to the semiconductor-related product at the secondary provider is performed by the primary provider.

3. (Currently Amended) The ~~system~~ method of claim 1 wherein the maintaining an exchange of information ~~first mechanism~~ uses a first network for exchanging information between the primary and secondary providers, and the providing the collected exchanged information and the collected event information ~~fourth mechanism~~ uses a second network, different from the first network.

4. (Currently Amended) The ~~system~~ method of claim 3 wherein the maintaining an exchange of information ~~first mechanism~~ uses a dedicated bi-directional path of the first network, and wherein the collecting the exchanged information ~~second mechanism~~ is for ~~provides~~ continuously collecting the exchanged information.

5. (Currently Amended) The ~~system~~ method of claim 1 wherein the providing the collected exchanged information and the collected event information includes using ~~fourth mechanism~~ is an enterprise control system that includes a customer interface in the form of a web browser.

6. (Currently Amended) A method of business-to-business exchange between providers in a semiconductor manufacturing environment, the method comprising:
- exchanging a product from a primary provider to a secondary provider;
 - assigning event elements to the product through the virtual fab, wherein the event elements include a plurality of process steps performed by the secondary provider;
 - transmitting information associated with the product throughout a virtual fab, wherein the transmission of information occurs continuously and multi-directionally between the providers through the virtual fab, and wherein the information is associated with the assigned event elements, and wherein the information includes a time of an event element and a quantity of the product yielded;
 - storing at least a portion of the transmitted information; and
 - providing the portion of the transmitted information to a customer in response to a customer request.
7. (Original) The method of claim 6 wherein the primary provider is a semiconductor fab and the product is a lot of semiconductor wafers.
8. (Currently Amended) The method of claim 7 ~~further comprising:~~
- wherein the assigning event elements to the product through the virtual fab[:,] includes the secondary provider defining an event element and the primary provide modifying the event element.
9. (Original) The method of claim 8 wherein the event elements include process completion at a predetermined check point.
10. (Original) The method of claim 8 wherein the event elements of the primary provider and the secondary provider comprise product process steps, the event elements track the product through the virtual fab.
11. (Original) The method of claim 7 wherein the information includes product lot identification and product lot history.
12. (Original) The method of claim 7, wherein the step of providing uses a service system interface for communicating between a computer system associated with the customer and a computer system associated with the semiconductor fab.

13. (Canceled)

14. (Currently Amended) The ~~system of claim 13~~ method of claim 6 wherein the primary provider is a semiconductor fab facility.

15. (Currently Amended) The ~~system of claim 13~~ method of claim 6 wherein the secondary provider is a sub-contractor.

16. (Currently Amended) The ~~system of claim 13~~ method of claim 6 wherein the primary provider is a semiconductor design house.

17. (Currently Amended) The ~~system of claim 13~~ method of claim 6 wherein the secondary provider is a equipment vendor.

18. (Currently Amended) The ~~system of claim 13~~ method of claim 7 wherein the event elements of the primary provider and secondary provider comprise product process steps to occur at the secondary provider, the event elements track the product through the virtual fab.

19. (Currently Amended) The ~~system~~ method of claim 18 wherein the event elements include manufacturing process checkpoints.

20. (Canceled)

21. (Currently Amended) A ~~software program stored on a computer~~ readable recordable medium including computer-readable instructions the software program being used for tracking and managing a plurality product and information through a semiconductor manufacturing environment, the ~~software program~~ computer-readable instructions comprising:

instructions for establishing a virtual fab with a plurality of entities, each entity associated with an internal process to a semiconductor fab or an external process to the semiconductor fab;

instructions for a plurality of event elements for tracking the product through the plurality of entities of the virtual fab, wherein a plurality of event elements are provided for each of the plurality of entities of the virtual fab;

instructions for a communications interface for interacting with a enterprise control entity and the plurality of event elements;

instructions for controlling the product quality, wherein the product quality may be controlled by at least two of the plurality of entities;

instructions for determining a future location for the product and the associated information through the virtual fab via the enterprise control entity; and

instructions for amending the associated information to the recordable medium through the virtual fab.

22. (Currently Amended) The ~~software program~~ computer-readable medium of claim 21 wherein the plurality of entities include:

at least one entity associated with a primary provider manufacturing executing system in the virtual fab;

at least one entity associated with a secondary provider manufacturing executing system in the virtual fab;

at least one entity associated with a manufacturer of the semiconductor equipment vendor;

at least one entity associated with a manufacturer of the sub-contractor;

at least one entity associated with a manufacturer of the semiconductor design house;

at least one entity associated with a customer of products being manufactured by the semiconductor fab; and

at least one entity associated with engineering support for the either or both of the primary and second manufacturing executing system.

23. (New) The method of claim 6, wherein the transmitting information includes the primary provider transmitting a process parameter of a process performed by the secondary provider to the secondary provider based on the received information.

24. (New) The method of claim 6, further comprising:

the primary provider performing quality control function at the secondary provider using the information received.